Journal of Craniomaxillofacial Research

Vol. 5, No. 4 Autumn 2018

The prevalence of burnout syndrome among general dentists in Qazvin, Iran in 2017

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ARTICLE INFO

Article Type:
Original Article

Received: 23 May. 2018
Revised: 8 Jun. 2018
Accepted: 15 Jul. 2018

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ABSTRACT

Background: Dentists suffer a massive burn out in their professional work because they are under extreme mental and physical pressure through their work.

Object: This study investigates to findthe dimensions of burnout such as emotional exhaustion, depersonalization, and a low sense of personal fulfillment of dentists in Qazvin and its associated factors to prevent and reducethis side effect.

Materials and Methods: This cross sectional study used a maslach questionnaire among 103 generally dentists in Qazvin. The SPSS version 20 served for statistical analyses.

Results: Among the dentists 57.3% were men and mean age was 42 years. For emotional exhaustion more than 60% of participants were in low conditionand about 14% had severe emotional exhaustion. Majority of dentists in the study were in slight condition but 15.5% had severe depersonalization. None of the dentists studied was in difficulty in terms of job adequacy, and all of them had favorable job performance.

Conclusion: Comparing the findings with similar researches, the burnout rate on Qazvin dentists is in favorable condition and even lower than other studies.

Keywords: Burnout syndrome; General dentist; Maslach questionnaire; Physical and emotional exhaustion; Depersonalization and personal accomplishment.

Introduction

Dentists experience a scale of burn out in their professional work because they scrimmage variety of stressful factors [1]. Burnout is a syndrome of emotional exhaustion (EE) that occurs among people who do "people-work" of some types and explained by three dimensions: increased EE (feeling of fatigue by the stress of the job), increased depersonalization (DP; development of negative and cynical attitudes) or reduced levels of personal accomplishment (PA; decrease of feelings of suitability and self-fulfillment) [1-3]. Burnout impacts on both professional and private affairs of a dentist, therefore result to unsuccessful consequence on quality of job [1, 4]. Studies demonstrate burned-out members presentation poor job efficiency and may face serious health issue over the long term [5]. Employees who have undergone general stress can come back to their normal condition through adaptive mechanisms, but employees who have undergone burnout cannot come back to a normal condition because

Some research have shown that many occupational such as dentists can experience increased professional burnout, which is a syndrome including by emotional exhaustion, depersonalization, and a low sense of personal fulfillment [4,7]. Professional stress is a physical and mental reaction of a person with working environment and mismatching his/her job needs with his/her abilities and demands [8,9]. Burnout can result in turnover, absenteeism, lack of position fidelity, and position dissatisfaction, and is related to the variables that cause job-related problems, such as lowering the efficiency of the federation. Therefore, many searches have demonstrated that burnout is related to turnover aim [6,10].

The Maslach Burnout Inventory (MBI) is an approach for evaluation burnout syndrome, frequently. MBI consist of 22-item questionnaire that assesses EE, DP and PA [2,6,11]. Recent studies have shown stress factors such as professional workload, time limitation, and role struggle are the important factors in the development of burnout [1]. Therefore, study about burnout risk factors are suitable consultation for subsequent prevention and intervention. Several studies show the existence of stress among dentists, but no studies have shown the prevalence of burn out in Qazvin. Therefore this study investigates to findthe dimensions of burnout such as emotional exhaustion, depersonalization, and a low sense of personal fulfillment of dentists in Qazvin and its associating factorsto prevent and reducethis side effect.

Methods and Materials

This cross-sectional research was conducted in 2015 in Iran. In this study, 103 general dentists of Qazvin were selected using the random sampling method. General dentists were personally visited in their office and they were asked to complete demographic characteristics and burnout questionnaires. After a brief justification about the research and its aims, the maslach questionnaire was handed to them. They were also informed and assured about confidentiality and data protection. The methods and proposal of this study was reviewed and approved with the Ethical Review Board and Research Committee of Qazvin University of Medical Sciences (code number: IR.QUMS.REC.1395.160).

Data collection was done by a questionnaire that consists of self-reported and multi-section questions. The first section contained personal and occupational items of the participants such as age, gender, marital status, years after graduation, years of practice, average weekly working hours, numberof the patient per day, reading, exercise, artistic and cultural activity and evaluation of self-perceived health. The second part was the Maslash›s 22-question questionnaire of occupational burnout consisting of physical and emotional exhaustion, depersonalization and personal accomplishment parts that measures dentist's burn out (Table1). In this self- administered questionnaire, the responses are based on the Likert scale from «never, very low, low, medium, medium to high, high and very high « that were scored from zero (never) to six (every day).

As this study shows, the severity of exhaustion was similar to the scores of the frequency, therefore had similar results. Thus, the results are related only to the frequency of job burnout that is demonstrated in each of the three dimensions. Based on the reference scores in emotional exhaustion, the score below 17 is as mild fatigue, 18 to 29 as moderate, and above 30 as severe; at the depersonalization dimension, the score below 6 was mild burnout, 7 to 11 moderate, and above 12 was severe, and in the following, the personal accomplishment the score above 42 as mild exhaustion, 34 to 39 intermediate and below 33 is considered severe exhaustions. Initial data collected using the questionnaire, that statistical software was analyzedby SPSS version 22. The scale of this questionnaire was taken 5 consist of «never, very low, low, medium, medium to high, high, very high «that the person according to himself can select an option.

The demographic data was analyzed by inferential statistical methods including t-student›s test, one-way ANOVA and correlation coefficient to the validity and reliability of the research hypotheses has been done. A total of 103 questionnaires were complete and information was obtained that wasanalyzed in SPSS software version 20. The $p<0.05$ was significant.

Result

The results showed that most general dentists in Qazvin were 40-49 years old (47/6%). The least number was also for the age group of 20-29 years old (3/9%) (Table 1). Among the dentists, 57.3% (59 people) were male and 42.7% (44 persons) were female. Most of dentist had between 10 to 19 years of experience (50.5%) (Table 2). The results demonstrated: 24 (23.3%) persons were employing in the clinic, 61 (60%) in private clinics and also, 18 (17.5%) in both occupations. 52.4% (54 persons) of them were working in both morning and afternoon shift and 18 (17.5%) in the shift in the morning. The average hours of work for 46.6% (48 people) of dentists were 21 to 30 hours per week and 11.7% [12] expressed their working hours 40 hours or more. Most of the dentists (64.1%) treated about 6 to 10 pa-

tients during the day, and only 7.7% of dentists were treated daily for 11 to 15 patients.

Most the persons (about 40%) were exercising a sport field as well as their jobs, 25% of them were reading books and 15.5% of them did artistic activity (Table 1). The findings showed that most of the participants (43%) rated their health were moderate, 37% were good and only 2% were highly poor and 55 (53.4%) of them never «felt that they had reached the end of the line», and this feeling was very low in 37 of them, only 2 (1.8%) rated such a perception. More than 50% of the dentists have evaluated the terms of «difficulty at work with my colleagues,» «I feel I› m struggling,» «my job has made me to feel useless,» and «I feel tired when I have to work on the morning,» from low to very low. None of them in the terms of «has difficulty working with my colleagues», and «my job has made me feel unnecessary», and «I do not feel much about my tiredness» was from high to very high.

Among the depersonalization indicators, 60.2% of the study participants admitted they never really care about what happens to some of their colleagues. The remaining indicators do not also differ significantly. 42.7% was never worried about «I am worried that this job makes me inexorable person. Nobody rated high and very high to «They became negligibleto others» and about "their colleagues blame them for some problems.

In the term of job adequacy, the studied people were not agree very much that they could offer their colleagues a relaxed environment. More than 25% answered high and very high about «I can easily understand the feelings of my colleagues», «I have made a lot of value in a job as a dentist. «, and «I could deal with emotional and psychological problems with sobriety.

The results also showed that the average of emotional exhaustion was 17.11±9.23 with a range of 38 (the lowest emotional fatigue score 1 and maximum 39). The average of depersonalization were 6.01±4.54 that a range of 19 (the lowest score of 0 and maximum 19). The average occupation sufficiency dimension was 28.04±5.96 with a range of 28 (least score 8 and maximum 36). The total average of burnout scores was 4623.17±17.08 that a range of 78 (the lowest score 10 and highest 88) (Table 3). Based on the test standard, the emotional exhaustion dimension described the following, the score below 17 was mild burnout, moderate 18 to 29, over 30 severe. The depersonalization dimension expressed score below 6, mild, moderate to 7-11, and severe above 12 score. Then, the sense of personal efficiency dimension were mild if above 40, moderate to 34-39, and lower than 33 percent, severe. The findings showed the depersonalization dimension, most the subjects (64.1%) were mild and the emotional exhaustion dimension (60.2%) were mild, but all subjects had high job efficiency. burnout. Independent t-test was used to examine the relationship between job burnout and gender. The results of the test showed that the average score of women in total burnout was 45.84±15.1 and the average score of men was 46.42±18.58, however, the relationship between sex and burnout was not significantly different (p>0.05).

Analysis of variance was used to examine the relationship between job burnout and age variables, duration of study, work experience, work shift, workplace, number of patients, other activities and their health. Results showed that there was a significant relationship between job burnout and age of the subjects (p=0.006) There was a significant relationship between job burnout and graduation time (p=0.000). The average scores of those between the ages of 20 and 29 years of their graduation were more than the other groups. The relationship between job burnout and employment duration of the subjects was significant (p=0.043).

There is no significant relationship between employment location, work shift, the number of patients treated by dentists per day and burnout (p=0.089), (p 0.379) and (p=0.508). A significant relationship was found between the average hours of working dentists and burnout (p=0.007). So that the highest score of burnout was for those who were active for 10 to 20 hours. There was a significant relationship between different activities such as exercise, reading, art and other activities with burnout (p=0.000). So that, the lowest level of burnout reported accompanied exercise and the highest level wasrelated to reading something. The results of this study showed that the relationship between health evaluation and burnout was significant, too (p=0.000). (Table 2) (Figure1-6).

Discussion

The results of this study showed that most of the dentists were employed in the office. More than half of them practiced in the morning as well as the evening. About half of them worked between 21 to 30 hours a week. More than two thirds of them treated more than 6 patients during the day. Half of the dentists assessed their health condition high and very high. More than two third of them had reported more than 30 years of work experience. The majority of them were over 40 years old. More than 60% of them had expressed a mild emotional exhaustion, but nearly 14% reported severe emotional exhaustion. This investigation reported that the majority of dentists showed a mild depersonalization, while, 15% of them showed severe depersonalization. In our study, all of dentists had a high job performance and job sufficiency. Denton at 2008 demonstrated that a small proportion (8%) of UK dentists experienced significant burnout in all three dimensions: emotional exhaustion, depersonalization and personal accomplishment. A further 6.7% possessed a combination of unfavorable scores in the two dimensions which are considered to be the core elements of the burnout syndrome, emotional exhaustion and depersonalization [12].

Amiri at 2016 demonstrate a significant relationship between work experience and emotional exhaustion. It seems, insufficiency of occupation improvement opportunities for dentists lead to many of them express higher levels of emotional exhaustion as they grow older and more experienced [5]. Dwivedi at 2016 reported more than one third of the dentists (41.3%) felt pleasure emotion and agreed that they have been satisfied expectation of their patients [1]. Reddy at 2017 showed 11.3% of high burnout level of dentists seen in their personal clinics. Dentists who have this problem are very low in number but the consequence of this behavior can be addiction to alcohol and drug [13]. Carneiro at 2013 in Brazil demonstrated burnout syndrome were seen in 32% of dentists, no significant differences items had seen including gender and working hours, married status and years of occupation [14]. Reddy at 2014 showed higher scores of exhausted mentally between all the students of third years and postgraduates [15]. The findings of Heydari at 2014 showed high level of burn out exceptionally in female faculty members is significant. They also showed relation between job environment factors and specially emotional exhaustion [16].

Study of Bonafé at 2014 observed a noticeable relation between the initiation of burn out syndrome and the students gender. However, this relation is not valid in the investigation because since the difference between personal and sociocultural characteristics between samples can change this result [17]. Thus, it is necessary to the comparison between the results from various studies must be uniform. Montero at 2011 also reported the relationship between the socio-demographic factors and the different results from difference studies [18]. Ahola at 2014 showed that association between burnout and depressive symptoms [19]. They had also reported the burnout and depressive symptoms can be altered together [19]. Finally, Poor quality of treatment, increased complications and finally, a weak health development can end burn out among dentists [20]. This study evaluated prevalence of burn out among Qazvin dentists and also assessed the relationship between occupational burn out and age, gender, marital status, duration of work hours, shift work, location of work, number of patient per day, the years late graduation and experience. The present study demonstrated the job sufficient of dentists was in favorable balance. Although in dimensions of depersonalization and emotional exhaustion, about one third of the subjects are moderately and severely exhausted.

Emotional exhaustion questionnaire
I feel my work has taken my energy.
I feel abusive, at the end of the day
I feel tired in the morning that I have to go to work
It is difficult to work with my colleagues for the whole day
I feel mentally tired because of work.
My job has made me feel futile.
I feel like doing my work hard
Working with my colleagues is hard for me
I feel I'm at the end of the line
Depersonalization
I feel I deal with my colleagues like an objects.
Since the time of this occupation, I have noticed others.
I am worried that this will make me worse than others.
It does not really matter to me what about some of my colleagues
I feel my colleagues blame me for some problems.
Personal accomplishment
I can easily understand the feelings of my colleagues.
I feel comfortable with my colleagues to deal.
I feel that I have a positive impact on my colleagues through my career.
I feel full of energy and energy.
I can easily provide a relaxed environment for my colleagues.
After working with my colleagues I feel joy.
My job has earned me valuable gains.
I deal with the emotional and psychological problems of a very decent mind in my career.

Table 1. Questionnaire.

	N	%	Options
Age	4	3.9	20-29
	30	29.1	30-39
	49	47.6	40-49
	20	19.4	50≤
Workplace type	24	23.3	Clinic General
	61	59.2	Private clinic
	18	17.5	Both
Working shift	31	30.1	Evening
	18	17.5	Morning
	54	52.4	Both
Working hours per week	15	14.6	10-20 hours
	48	46.6	21-30 hours
	28	27.2	31-40 hours
	12	11.7	More than 40 hours
Number patient per day	27	26.2	1-5 patient
	66	64.1	6-10 patient
	10	9.7	11-15 patient
Interesting activity	41	39.8	Exercise
	16	15.5	Artistic activity
	26	25.2	Reading
	20	19.4	etc.
Years of practice	14	13.6	1-9
	52	50.5	10-19
	32	31.1	20-29
	4	3.9	30-39
	1	1.0	≥40

Table 2. Characteristics and activity type of the dentists.

Characteristic	Gender	N	%	P value	Grade	N	%	Mean	SE	Scale	Min	Max
Emotional exhaustion	Male	59	17.27	0.83	mild	66	64.1	17.11	9.23	38	1	39
					intermediate	21	20.4					
	Female	44	16.9		Severe	16	15.5					
Depersonalization	Male	59	6.59	0.13	mild	62	60.2	6.01	4.54	19	0	19
					intermediate	27	26.2					
	Famle	44	5.25		severe	14	13.6					
Personal accomplishment	Male	59	42.55	0.34	mild	0	0	23.04	5.96	28	8	36
					intermediate	0	0					
	Female	44	23.68		severe	103	100					
Burn out	Male	59	46.42	0.86				46.17	17.08	78	10	88
	Female	44	45.84									

Table 3. The mean scores of occupational burnout dimensions.

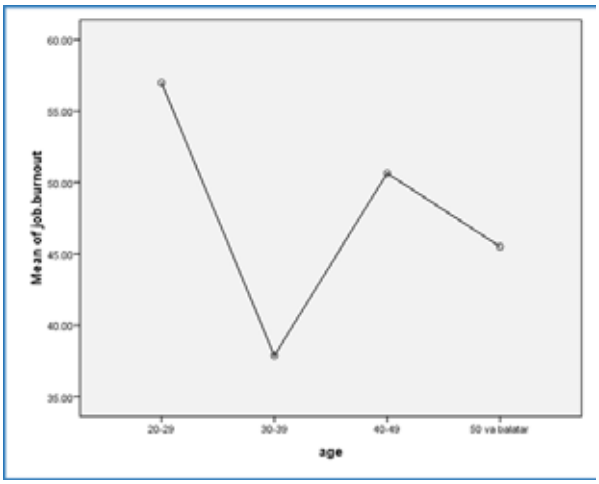

Figure 1. Relationship burn out syndrome and age.

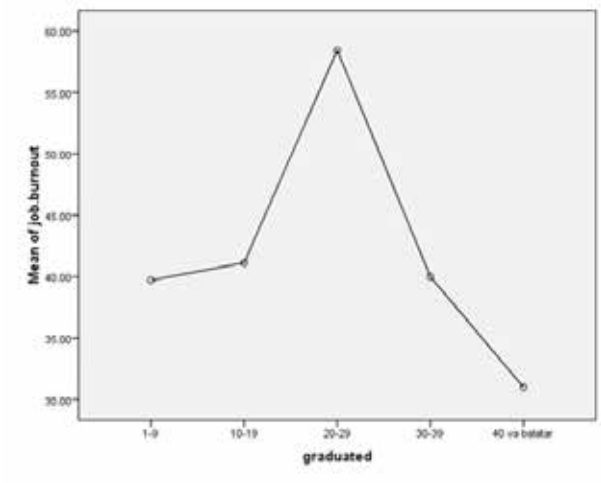

Figure 2. Relationship burn out syndrome and years after graduation.

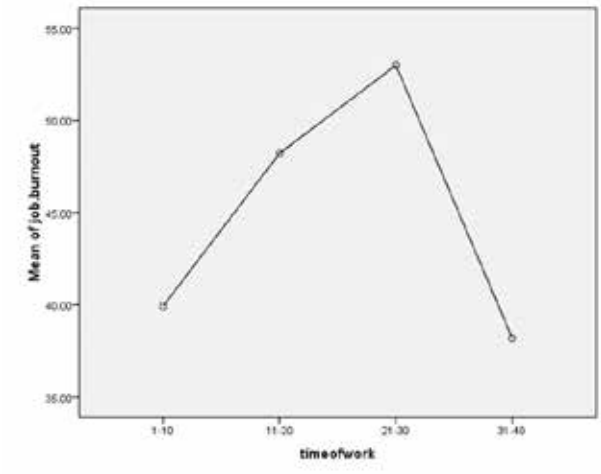

Figure 3. Relationship burn out syndrome and time of work.

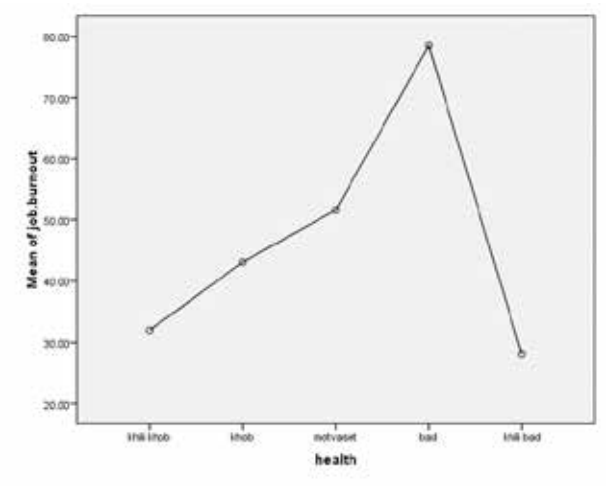

Figure 4. Relationship burn out syndrome and self-perceived health health.

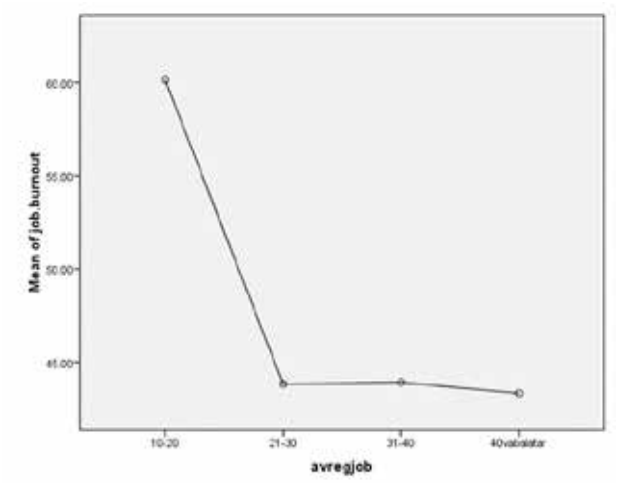

Figure 5. Relationship burn out syndrome and average weekly working hours.

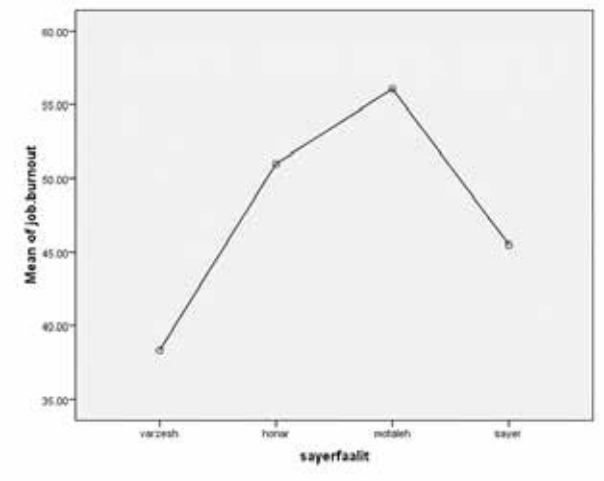

Figure 6. Relationship burn out syndrome and cultural activity.

Conclusion

Burnout between dentists is a universal event, it is concluded that Qazvin dentists experienced low occupational burn out mostly in depersonalization and emotional exhaustion dimensions.

Conflict of Interest

There is no conflict of interest to declare.

References

[1] Dwivedi A, Purohit B, Bhambal A. Is Dentistry Turning into Weary Profession? Dimensionality of Experienced Professional Burnout among Dentists in Central India. Dentistry. 2016; 6(391):2161-1122.1000391.

[2] Singh P, Aulak D, Mangat S, Aulak M. Systematic review: factors contributing to burnout in dentistry. Occupational Medicine. 2015; 66(1):27-31.

[3] Wurm W, Vogel K, Holl A, Ebner C, Bayer D, Mörkl S, et al. Depression-burnout overlap in physicians. PloS one. 2016; 11(3):e0149913.

[4] Roghanizad N, Vatanpoor M, Seddigh Oraee SN, Sharifi V, Abbasi M. Prevalence of burnout syndrome and its three dimensions in dental faculty members of Azad Dental University in 2008. Journal of Islamic Dental Association of Iran. 2013; 25(1):45-52.

[5] Amiri M, Khosravi A, Eghtesadi AR, Sadeghi Z, Abedi G, Ranjbar M, et al. Burnout and its Influencing Factors among Primary Health Care Providers in the North East of Iran. PloS one. 2016; 11(12):e0167648.

[6] Jin MU, Jeong SH, Kim EK, Choi YH, Song KB. Burnout and its related factors in Korean dentists. International dental journal. 2015; 65(1):22-31.

[7] Huri M, Bağış N, Eren H, Umaroğlu M, Orhan K. Association between burnout and depressive symptoms among Turkish dentists. Journal of Dental Sciences. 2016; 11(4):353-9.

[8] Nazari H, Jariani M, Beiranvand S, Saki M, Aghajeri N, Ebrahimzadeh F. The prevalence of job stress and its relationship with burnout syndrome among the academic members of Lorestan University of Medical Sciences. Journal of caring sciences. 2016; 5(1):75.

[9] Basson R. Management and prevention of burnout in the dental practitioner. Dentistry. 2012; 3(2):168.

[10] Crego A, Carrillo-Diaz M, Armfield JM, Romero M. Stress and academic performance in dental students: the role of coping strategies and examination-related self-efficacy. Journal of dental education. 2016; 80(2):165-72.

[11] Maslach C, Jackson SE. Leiter MP Maslach Burnout Inventory Manual. Palo Alto. California: Consulting Psychological Press, Inc; 1996.

[12]Denton D, Newton J, Bower E. Occupational burnout and work engagement: a national survey of dentists in the United Kingdom. British dental journal. 2008; 205(7):E13-E.

[13] Reddy M, Shwetha H, Mishra M. Assessment of occupational burnout among private dental practioners in Bengaluru city-a cross sectional study. International Journal of Dental Research. 2017; 5(1):55-9.

[14]Carneiro SDRM, Tourinho CC, Vale TAPd, Campêlo YdSG, Gomes FdA, Lima DLF. Burnout syndrome: evaluation in dentists in the city of Fortaleza, Brazil. RSBO (Online). 2013; 10(3):266-71.

[15] Reddy S, Reddy RL, Ramesh T, Vijayalaxmi N, Swapna L, Singh TR. Burnout among Dental Faculty and Students in a Dental College. Indian Journal of Public Health Research & Development. 2014; 5(1):64.

[16] Heydari A, Ahanchian Mr, Mahdizadeh Sm. Survey the burnout and its effect in Ework Environment factors on Nursing Faculty Members In Khorasan Razavi Province in 1391. 2014.

[17] Bonafé FSS, Maroco J, Campos JADB. Predictors of Burnout Syndrome in Dentistry Students. Psychology, Community & Health. 2014; 3(3):120.

[18] Montero-Marin J, Monticelli F, Casas M, Roman A, Tomas I, Gili M, et al. Burnout syndrome among dental students: a short version of the» Burnout Clinical Subtype Questionnaire» adapted for students (BCSQ-12-SS). BMC medical educa-

tion. 2011; 11(1):103.

[19] Ahola K, Hakanen J, Perhoniemi R, Mutanen P. Relationship between burnout and depressive symptoms: a study using the person-centred approach. Burnout Research. 2014; 1(1):29-37.

[20] Kumar S, editor Burnout and doctors: prevalence, prevention and intervention. Healthcare; 2016: Multidisciplinary Digital Publishing Institute.

Please cite this paper as:
Bolbolian M, Mir Keshavarz M, Sefidi F, Mir A; The prevalence of burnout syndrome among general dentists in Qazvin, Iran in 2017 . J Craniomax Res 2018; 5(4): 145-153